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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/649,683	08/28/2003	Imants Lauks	PAT 927-2 US	5656
26123 7590 07/22/2008 BORDEN LADNER GERVAIS LLP Anne Kinsman WORLD EXCHANGE PLAZA 100 QUEEN STREET SUITE 1100 OTTAWA, ON K1P 1J9 CANADA				
EXAMINER				
NAGPAUL, JYOTI				
ART UNIT		PAPER NUMBER		
1797				
NOTIFICATION DATE		DELIVERY MODE		
07/22/2008		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ipinfo@blgcanada.com  
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akinsman@blgcanada.com

### Office Action Summary

**Application No.**

10/649,683

**Applicant(s)**

LAUKS ET AL.

**Examiner**

JYOTI NAGPAUL

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 April 2008.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 and 81-85 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-28 and 81-85 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date 12/21/2007  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

Amendment filed on April 28, 2008 has been acknowledged. Claims 1-28 and 81-85 are pending.

#### ***Response to Amendment***

Rejection of Claims 1, 21 and 24-25 as being anticipated by Stiene (WO 02/49507) has been modified in light of applicants' amendments and remarks.

Rejection of Claims 2, 10-12, 19-20 and 22-23 as being unpatentable over Stiene in view of Paul (US 6013164) has been modified in light of applicants' amendments and remarks.

Rejection of Claims 17 and 18 as being unpatentable over Stiene in view of Levy (US 6030582) been withdrawn in light of applicants' amendments and remarks.

#### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claim recites "a connector fluidically connecting the reservoir with the fluid application end to supply the injector fluid to the application end."

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1-9, 13-14, 21, 24-28, 81, 83 and 84** are rejected under 35 U.S.C. 102(b) as being anticipated by Stiene (WO 02/49507).

As for Claims 1-9, Stiene teaches an apparatus for measuring certain properties of a fluid. The apparatus comprises an injector fluid reservoir (patient) for containing the aqueous injector fluid, an initially dry microporous lateral flow strip (**84**) (See pg 35, Lines 21-35) having a fluid application end (7) for accepting injector fluid and an effluent end, for example the location where the fluid stops where the vent (**81**) is in Figure 8i, for delivering to the receiving location, see Figure 6e. Stiene further teaches a connector (**83**) for fluidically connecting the reservoir with the fluid application end to supply the injector fluid to the application end. Stiene further teaches an isolator/vent/air gap (**81**) for fluidically isolating the effluent end from the receiving location when the fluidic path includes a fluid. Stiene further teaches driving means/pair of electrodes (**610**) for osmotically pumping injector fluid out of the effluent end of the fluidic path element and across the isolator to the fluid receiving location of a downstream device. (See Figures 6c-6e) Stiene further teaches a sealing element/laminate for sealing the fluidic path along a perimeter thereof to prevent fluid flow from the fluidic path/channel at the perimeter during electro-osmotic pumping. (For

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example, see pg 27, Lines 13-18 and pg 29 Lines 25-34) With respect to Claim 14, Stiene's device is clearly capable of generating a field free region in the fluidic path at the effluent end during electro-osmotic pumping.

As for Claim 21, Stiene fails to teach the electro-osmotically pumped fluid has an electrolyte concentration of less than 10 milimolar. However, applicants' are claiming an apparatus. It is fundamental that an apparatus claim defines the structure of the invention and not how the structure is used in a process or what **material** the structure houses in carrying out the process. (See Ex parte Masham) As long as the device of Stiene is capable of electro-osmotically pumping fluid that has an electrolyte concentration of less than 10 milimolar, then the prior art meets the requirements of the claimed feature.

As for Claims 81 and 84, Stiene teaches an apparatus for measuring certain properties of a fluid. The apparatus comprises an initially dry fluidic path (4) having a fluid application end (7) for accepting injector fluid and an effluent end, for example the location where the fluid stops where the hydrophobic gate is in Figure 6c, for delivering to the receiving location, see Figure 6e. Stiene further teaches an isolator/hydrophobic gate for fluidly isolating the effluent end from the receiving location when the fluidic path includes a fluid. Stiene further teaches driving means/electrodes for osmotically pumping injector fluid out of the effluent end of the fluidic path element and across the isolator to the fluid receiving location of a downstream device. (See Figures 6c-6e) Stiene further teaches a sealing element/laminate for sealing the fluidic path along a perimeter thereof to prevent fluid flow from the fluidic path/channel at the perimeter

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during electro-osmotic pumping. (For example, see pg 27, Lines 13-18 and pg 29 Lines 25-34)

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. **Claims 10-12, 15-20, 22-23 and 82** are rejected under 35 U.S.C. 103(a) as being unpatentable over Stiene in view of Paul (US 6013164).

Refer above for the teachings of Stiene.

Paul teaches an apparatus for pumping and manipulating fluid flow in packed capillary based systems. Paul discloses at least one capillary channel forming a fluid passageway and having a porous dielectric medium disposed therein to cause an electrolyte to move in the microchannel and increase fluid flow control through the system. (See Col. 1, Lines 58-68) (See Col. 2, Lines 1-10)

As for claims 10-11 and 15-16, Stiene fails to teach the fluidic path contains a mobilizable reagent selected from the group of luminogenic, fluorigenic, electrogenic and chemoluminescent substrates and combinations thereof. However, applicants' are claiming an apparatus. It is fundamental that an apparatus claim defines the structure of the invention and not how the structure is used in a process or what material the structure houses in carrying out the process. (See Ex parte Masham) As long as the fluidic path of Stiene and Paul are capable of containing a mobilizable reagent, the prior art meets the requirements of the claimed feature.

Additionally, it would have been obvious to one having ordinary skill in the art to provide the fluidic path of Paul with a mobilizable reagent selected from the group of luminogenic, fluorigenic, electrogenic and chemoluminescent substrates and combinations thereof to achieve the predictable results of versatility in detection of the sample.

As for claim 17-18, Stiene fails to teach an integral fluid reservoir. It would have been obvious to one having ordinary skill in the art to provide an integral fluid reservoir with sample or fluid to achieve the predictable results of maximizing the efficiency of the device.

As for claims 19 and 20, Stiene and Paul fails to teach the micro-porous fluidic path has pores less than 0.2 micrometer radius. Paul teaches micro-porous fluidic path. It would have been obvious to one having ordinary skill in the art to provide the device of Stiene and Paul with a micro-porous fluidic path having pores less than 0.2 micrometer radius to achieve the predictable results of obtaining the analyte of interest and thus increasing the efficiency of the overall process.

As for Claims 22 and 23, Stiene and Paul fail to teach the fluidic path is trapezoidal shaped with its fluid application end wider than its effluent end. It would have been obvious to one having ordinary skill in the art to provide a fluidic path that is trapezoidal shaped with its fluid application end wider than its effluent end to achieve predictable results of better flow control through the device.

#### ***Response to Arguments***

9. Applicant's arguments with respect to claims 1-28 and 81-85 have been considered but are moot in view of the new ground(s) of rejection. (Refer above)

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JYOTI NAGPAUL whose telephone number is (571)272-1273. The examiner can normally be reached on Monday thru Friday (10:00-7:30).



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JN

/Brian J. Sines/  
Primary Examiner, Art Unit 1797